AIDS Brief

For sectoral planners and managers

Manufacturing Sector

HIV/AIDS is affecting and will continue to affect economies and society at all levels, from the household to the macro-economy. Between these two extremes are effects on communities, enterprises, and social and economic sectors. It is at the lower middle levels, which include the productive sectors, that the worst effect may be experienced and interventions are most urgently required.

The epidemic will affect production in two ways. Firstly there will be increased morbidity (illness) and mortality (death) among the workers. Secondly there will be changes in earning capacity and the pattern of expenditure. People may earn less and divert their incomes from consumption and savings to health care.

This AIDS Brief provides some ideas as to how the productive sector of manufacturing may be affected and what types of response may be required or possible from government officials, managers, enterprise owners and trade union officials or worker representatives.

Definition

Manufacturing is defined as the physical or chemical transformation of materials or compounds into new products. The assembly of products from component parts also falls under this sector, except where it is more readily defined as construction. Manufacturing is the most diverse sector of most economies. It includes as sub-sectors: food products; drink and tobacco; textiles; clothing and footwear; wood products and furniture; paper and printing; chemical and petroleum products; bricks, glass and cement; basic metals; metal products; electrical machinery; transport equipment; and jewellery.

Manufacturing concerns vary in size from small one or two person operations, organised and operating in an informal manner, to massive multinational firms with plants in many countries and tens of thousands of employees. The impact of HIV/AIDS will vary with the type of operation, its size, location and employment package. These will themselves vary depending on the level of staff employed, the scarcity or otherwise of their skills, and whether they are locally or internationally recruited. This AIDS Brief is largely relevant to manufacturing enterprises with employees.

Manufacturing is generally the most dynamic part of the industrial sector and the economy, and anything that threatens manufacturing is likely to have a disproportionate effect on the overall economy. HIV/AIDS may be such a threat.

Background

Manufacturing is often seen as central to economic growth and development. It was long believed that countries had to move from production of primary products (agricultural goods and minerals), to developing industry, possibly through the processing of the primary products (agro-industry and mineral beneficiation). Once the industrial sector was sizeable and diversified, the country was regarded as developed. Thus one of the targets of most developing countries is to develop their manufacturing sector and various development strategies have been adopted to achieve this. Manufacturing is also seen as the major source of employment growth. As most manufacturing operations are urban based this has lead to rural urban migration, as rural people move to the towns in search of employment (and what may be perceived as a higher standard of living). Movement of people is associated with increased risk of disease transmission - including HIV/AIDS. In addition many new urban dwellers may find themselves living in shantytowns with few services.

The global share of manufacturing remains highly skewed in favour of the developed world. In 1990 the developed high-income countries with a sixth of the world's population accounted for 64% of the world's manufacturing. Despite the imbalances, the developing world's share of exported manufactured products

increased from 5% in 1970 to 22% in 1993, due largely to the rapid development of a few individual countries mainly in Asia. The ability of less developed countries to increase their global share of manufacturing, already severely hampered by structural economic problems, will be threatened even more by the potential impact of HIV / AIDS on the economically active population.

Key Elements

Labour

Labour is, of course, an essential input in the manufacturing sector, but the sector itself can be organised to be more or less labour or capital intensive. These choices are dependent on factors such as the availability of labour, the cost of labour and the level of required or available skills. These choices are further affected by policy decisions made either by the state or the investors of capital. Furthermore, as industrial performance is dependent on the productivity of labour, any factor which affects the availability, performance or cost of labour will have a direct effect on the operation.

Productivity

Productivity will be affected by:

Morbidity: During the illness of the employees they will take as much time off as they are able to. This will include the maximum allowable sick leave (in some countries labour legislation may make provision for long periods of sick leave, and require a medical board before a person is dismissed), and annual leave before they are dismissed or resign on medical grounds. There will also be instances of unauthorised absenteeism.

Mortality: Once a person dies (or has been released from employment) they must be replaced, and productivity will be reduced while the replacement is trained.

Other absenteeism: This will include compassionate leave to care for sick family members. In some countries time spent on funerals of families, friends or colleagues is considerable.

Replacement and training of labour

The ease with which labour can be replaced will vary depending on the labour intensiveness of a specific operation, the level of skills employed and the general availability of labour. If suitably skilled labour is unavailable it may take time some to replace the person.

Staff Morale

The loss of colleagues, increased workloads, potential discrimination, and general uncertainty about HIV/AIDS and the fear of infection may undermine staff morale. There have been instances of workplace disruption where workers refuse to work with a colleague known or believed to be HIV-positive.

Operations

Payroll costs: employee benefits

The costs of the epidemic will also be felt through the payroll depending on how this is structured. Where the employer simply pays a wage for work and the employee makes their own provision for health care, pensions, insurance and housing - or looks to the state to provide these things, then there will not be an immediate impact on the company's payroll cost. However in the longer term, if the state has to bear these costs, either revenue will have to be reallocated or additional revenue raised, possibly through higher taxes.

It is common for larger employers to provide benefits such as medical care, pensions, insurance, housing and death benefits to some (senior) or all of their staff. These benefits will have to be reappraised as their costs may increase or scale of benefits decrease.

Training and replacement cost for labour

Replacement cost of labour will vary depending on the labour intensity of a specific operation, the level of skills employed and the availability of labour. If suitable labour is not available additional costs will arise from the training.

Investment

All manufacturing enterprises require investment to maintain or increase capital stocks. The possible sources for this are either reinvested profits, or money raised through other sources such as the banks, financial institutions or stock markets. Major investments may depend on foreign direct investment, and indeed most developing countries actively seek to attract this. Some evidence suggests that AIDS will reduce sources of local capital as it is diverted in care and coping by the individuals and their families. There may even be dis-saving, when assets such as pension funds and insurance policies are surrendered in order to meet immediate needs. Foreign investors are sensitive to risks, and the HIV/AIDS situation in a particular country or region might

make them reconsider their investment decision. HIV/AIDS potentially increases training costs, as a "surplus training" strategy will have to be adopted to take account of increased illness and death in trained cohorts.

Sectoral Response

The globalisation of the manufacturing process facilitated by transnational corporations, increasing interpenetrating of markets and international subcontracting emphasises the potential global impact of the AIDS epidemic. The global market in manufactured goods is also highly competitive and will therefore be sensitive to increases in production and input costs which may result from the epidemic. Thus for example, local companies sub-contracted to multi-nationals may find that the failure to maintain efficiency due to HIV/AIDS among their workforce may decrease their attractiveness to such companies as reliable sub-contractors.

There is general agreement, sometimes supported by constitutional rights, that pre-employment testing of potential employees is misguided, expensive and unfair. Individuals infected with HIV are able to lead productive lives for many years and the risk of workplace transmission, in most economic sectors, is very small. Basic educational programmes and simple precautions should eradicate even this small percentage. Of greater concern are the economic implications of the epidemic. These will be reflected in additional costs to pension funds and medical aid as well as a reduced dividend on investment in human capital. Discriminating against HIV-infected people will, however, not reduce the cost of the epidemic which will still ultimately be borne by the broader society.

Reducing Workforce Susceptibility- Employer's Responsibility

Employers have a responsibility to ensure that their employees are not put at risk of illness or injury because of the nature of their work. In most countries there is legislation that supports such an obligation on the part of the employers. Ensuring HIV/AIDS is not transmitted at the workplace is part of this general obligation on employers. In general, manufacturing sector workers should not be vulnerable to infection because of the nature of their work (unlike transport workers or construction teams). Basic educational programmes and simple precautions (particularly in relation to the treatment of accidental injury in the workplace), should eradicate even the very small risk of accidental transmission.

Workers spend a large part of their time at work, and workplace education campaigns have been shown to be an effective way of combating the epidemic. The level of employer involvement can vary from providing space for educators to actively supporting such education with time and money. The greater the support the more effective campaigns will be, but the decision of how far to go should rest with the employers and will depend on their perception of the vulnerability of the company to losing labour, and the level of social responsibility.

If the labour force includes migrant workers, living away from their families, consideration should be given to recruiting workers who are not migrants; supporting those who are migrants in bringing their families to live with them, if possible; and providing more intensive education for workers and their dependants.

Reducing Employees' Vulnerability- the Trade Union's Responsibility

Where trade unions effectively represent the interests of their members they also have an important role in ensuring that:

- any potential for workplace transmission is reduced;
- larger employers introduce effective counselling policies for HIV-positive workers;
- employees who are HIV-positive are not discriminated against; and
- the unions are seen to be taking the epidemic seriously and supporting education programmes.

Reducing Sectoral Vulnerability

There are two aspects that require consideration: protecting the labour force, and controlling costs.

Protecting the labour force

AIDS education and prevention

Appropriate workplace AIDS education programmes can be effective. They must be correctly designed, and have the active involvement of senior management and

workers' representatives. It is crucial that management understands that AIDS education is a process that has to continue rather than a one-off event, and it will require a long term commitment. Workplace education campaigns aimed at behaviour change and condom promotion should therefore be put in place.

Treatment

Early and appropriate treatment of employees can extend their working lives and postpone the time when their employment will have to be terminated and they lose benefits. This is to the advantage of the worker, employee, families and state. As there is often a direct relationship between the spread of HIV/AIDS and STIs, as well as a variety of other diseases, these should be treated where possible.

Counselling

Counselling should be provided for infected and affected individuals. Part of the counselling should encourage infected individuals to continue working. Job security should not be threatened by disclosure of HIV-positive status.

Multi-skilling

Where the production process results in marked labour bottlenecks and / or is dependent on a few key individuals, multi-skilling should be encouraged. This means training workers for a variety of jobs and allowing them to be flexible.

Movement towards capital intensive operations

If labour is a serious constraint, consideration can be given to making the operation more capital intensive. However it should be noted that this will mean greater dependence on a smaller number of skilled workers, and may change the financial viability of the enterprise if its market position is dependent on using labour, which is, in terms of international rankings, cheap.

Controlling costs

The epidemic will result in loss of production and increased costs. It is in the interests of all that these be contained. Managing the epidemic and understanding its implications require knowledge of:

- the labour profile of the workforce, including age, sex and job categories;
  costs of employment;
- direct costs of illness-related benefits;
  employees' health and availability;
- health facilities available to employees.

Once these data are available they will help to:

- provide a profile and cost of the labour force;
  estimate the trends and consequences of ill-health;
- assess the success of prevention.

Where possible for larger companies, consideration should be given to modelling the epidemic, either using public domain software or an actuarial calculation to estimate the burden of morbidity and mortality.

In order to understand and control costs they need to be calculated. There are two possible ways of assessing the impact. The first is to calculate the direct and indirect costs generated by an individual HIV / AIDS case and aggregate them. This approach is not satisfactory, as there will be different cost factors which it will be difficult to attribute to individuals. A more simple method is to look at the enterprise balance-sheet and estimate the proportion of costs that can be attributed to the disease. The advantage of this is that it allows trends to be established and will enable the company to respond to specific changes in the costs.

A method for doing this is set out below (Steps 1 to 3). It can obviously be adapted for specific situations. It should be noted that in most enterprises the cost due specifically to HIV/AIDS will not be clearly identifiable, as management will not (and should not) know which employees are HIV-positive. However, in situations where there is high HIV prevalence, increases in morbidity and mortality can be ascribed to HIV.

The purpose of Step 1 is to show how important labour is in the operations of the enterprise. To the costs

Confidentiality

HIV/AIDS is a non-notifiable disease, and there are no obligatory responsibilities for either the doctor or patient to notify an employer or fellow employees of an infection. If voluntary testing is encouraged, to enable enterprises to anticipate and plan with greater accuracy, results should be confidential unless indicated otherwise by the infected individual.

Step 1 Calculating the baseline labour and material costs

Input	*Labour cost*		*Material cost*		*Total*
	Money	*%*	*Money*	*%*	
… …					
TOTAL					

listed in the table must be added those costs generated by: absenteeism and morbidity; excess recruitment; replacement and training costs; the Medical Department; additional sick pay; premature retirement; pensions; dependant benefits; and funeral costs. The results are summarised in Step 2.

Step 2 Costs generated by ill-health in an enterprise

Description	*Money costs*	*% of total*
Lost workforce		
Additional recruitment		
Medical department		
Funerals		
Pension for death and medical retirement		
TOTAL		

Step 3 brings the two previous steps together to calculate the additional costs generated by ill-health within the enterprise over a time period.

Step 3 Costs increase from year to year

Description	*Money costs*		*% increase*
	Year 1	*Year 2*	
Lost workforce			
Additional recruitment			
Medical department			
Funerals			
Pension for death and medical retirement			
Training			
Other costs specific to the enterprise			
TOTAL			

☑ Checklist

❑ ***Vulnerability to HIV Spread***

Human Resources:

- ❍ Are employees particularly susceptible to infection?
- ❍ Concentrations of predominantly male workers
- ❍ A high percentage of migrant labour
- ❍ The possibility of multiple sex partners
- ❍ Employees travel away from home without the spouse
- ❍ Possibility of drug and alcohol abuse
- ❍ Workers drawn mainly from poor areas with little social infastructure
- ❍ What are the minimum numbers / working hours necessary to maintain existing production?
- ❍ Are there bottlenecks in production, i.e. workers without whom the productive process can be crippled?
- ❍ Can more people be trained or employed if workers are lost? Are some skills scarce?

Training:

- ❍ Is training done?
- ❍ Current facilities and degree of utilisation?
- ❍ Potential for multi-skilling?
- ❍ Can HIV/AIDS awareness be included in all training programmes?

Productivity:

- ❍ Does the company have allowances for time off (sick leave, compassionate leave, funerals)? What effect will HIV have on these?
- ❍ What methods of monitoring this are in place? What can be put in place?
- ❍ What impact will AIDS have on numbers and working hours?

Employment benefits:

- ❍ In-house or external medical costs?
- ❍ Pension scheme and life insurance?
- ❍ Benefits for sick employees and for their dependants?
- ❍ Are these vulnerable to increased claims?

Prevention activities:

- ❍ Is there an HIV / AIDS workplace campaign?
- ❍ Does it have the support of management and unions?
- ❍ Is it ongoing?
- ❍ Are condoms available?
- ❍ Is STI treatment available?

AIDS impact assessment:

- ❍ Should the company carry out an impact assessment?
- ❍ Should the company prepare an AIDS or life-threatening disease policy?

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